

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number
WO 2005/033679 A1

(51) International Patent Classification⁷: G01N 21/41, G01M 11/02

(21) International Application Number: PCT/SE2004/001437

(22) International Filing Date: 7 October 2004 (07.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 0302676-2 9 October 2003 (09.10.2003) SE

(71) Applicant (for all designated States except US): NEURAL AB [SE/SE]; Nordmannavägen 50, S-224 75 Lund (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GUSTAFSSON, Mats [SE/SE]; S Förstadsgatan 2, S-211 43 Malmö (SE). SEBESTA, Mikael [SE/SE]; Stenbocksgatan 10 B, S-211 50 Malmö (SE). EGELBERG, Peter [SE/SE];

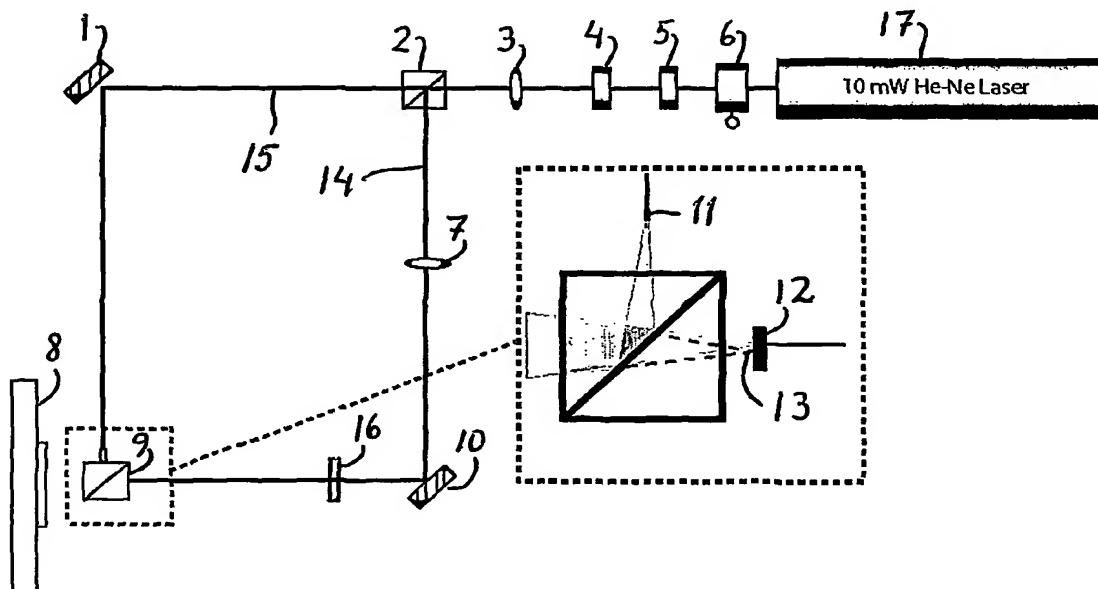
(54) Title: METHOD AND APPARATUS FOR HOLOGRAPHIC REFRACTOMETRY

(74) Agent: STRÖM & GULLIKSSON IPC AB; Box 4188, S-203 13 Malmö (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]



(57) Abstract: A method and device for determining refractive index of an object compared to a refractive index of a surrounding medium. The object is exposed to a laser object beam and the scattered light interferes with a laser reference beam to obtain a hologram. The hologram is analyzed for phase information, and based thereon, it is determined if the refractive index of the object is higher or lower than the refractive index of the surrounding medium.

WO 2005/033679 A1



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*